

## CENTRAL INTELLIGENCE AGENCY

## INFORMATION REPORT

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SECURITY INFORMATION

COUNTRY East Germany

REPORT NO. 

25X1A

SUBJECT Expansion and Reconstruction

DATE DISTR.

6 August 1953

NO. OF PAGES

18

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DATE OF INFO. REQUIREMENT NO. PLACE ACQUIRED 

REFERENCES

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SOURCE: GENERAL

1. In 1950, the construction of the new shipbuilding section began in conformance with the resolutions of the Five Year Plan. The construction was to progress in such a manner that during the First Five Year Plan, i.e., 1951 to 1955, nine Type I and five Type II vessels could be built. At the same time, the 1950 level of repair activities was to be maintained. The layout was so planned that the ship construction and the ship repair sections would be well coordinated, in order to make the best use of the facilities. The technical layout was based upon the following:
  - a. that the preliminary design group in June 1950 fix the annual production after 1955 at twelve Type I and six Type II vessels;
  - b. that the volume of ship repair work was to decrease and eventually was to reach a norm of not more than 33 per cent of the shipyard's capacity.

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2. The annual production figures listed above /in sub-paragraph a./ were only possible under the hypothesis that series construction was to be undertaken, through which the required production could be reached at any time the 10th buildingway load was laid down.

BUILDINGWAYS /See Point 1, Enclosure (A) and Enclosures (B) through (D)/

3. Buildingways No. 1, 2, 3, and 4, counting from south to north were, or were to be, of the same dimensions, i.e., 145 meters in length and 24 meters in width. Buildingway No. 2 was finished at the end of 1951 and No. 1 in the summer of 1952. Breasts of Nos. 3 and 4 were finished in the fall of 1952. However, Nos. 3 and 4 will probably remain incomplete until the workload of the shipyard requires four buildingways. Even the finished buildingways could not be fully utilized because of an acute shortage in steel sheeting. Investigations were conducted in order to find the best way of converting Nos. 1 and 2 into one transverse buildingway for submarine construction when it became necessary.
4. [redacted] determining a feasible method of constructing buildingways in Wismar in view of unfavorable conditions. The difficulties encountered, [redacted] solution /as shown on Enclosure (B)/ are described below.
5. The building ground west of the fitting-out basin was extremely bad. For instance, the ground able to support load in the area adjacent to the north-west corner of the West Harbor was found at about 35 m. below mean low water. It was planned to build the buildingways here, but normal means of constructing them could not be used.
6. In the area where the buildingways had actually been built, building ground able to support load was found at a depth of 10 to 15 m. below mean low water. Over the building ground able to support load, there were layers of plastic marl-clay. In order to speed up and simplify the construction, investigations were made to find means for utilizing the supporting capacity of these layers. After preliminary investigations and calculations, the following solution based on the static principle was found: "erection of buildingways as flat foundations on elastic bedding".
7. The ground was capable of carrying the load resulting from the static stress of the ship under construction. As it is known, the stress on the buildingway section above the water level increases many times during launching. In particular the horizontal stress increases to such an extent that the existing friction between the ground and the base of the buildingway would not have been sufficient. The danger would

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exist that, during launching, the lower sections of the buildingway would be forced to move in a direction toward the water.

8. In order to overcome this danger, a longitudinal anchorage, running underneath the entire buildingway installation, was developed and installed. The rare stress during launching could now be spread over the entire area of the entire buildingway installation.

#### CABLE CRANE INSTALLATION /Point (B), Enclosure (A)/

9. It comprised six cableways for each buildingway. Lifting capacity was five - ten tons per cable.
10. The eight foundations for the southern section of the cable crane installation were finished by the end of 1951 and those for the northern section by the end of 1952. The necessary cables were furnished by the USSR in the summer of 1951 and were kept in the shipyard. Large profile iron and heavy plates were lacking, so the southern section of the cableways will hardly be ready before the end of 1953.
11. Six cables of 10-ton lifting capacity each per buildingway, i.e., a payload of 50 tons per buildingway upon deduction of the weight of the traverse, were located at this site.

#### PRE-ASSEMBLY AREA /Point (C), Enclosure (A)/

12. Area: 175 x 100 m., including space for roads and tracks. The pre-assembly area was arranged between the buildingways and the shipbuilding shop. The paved southern half was finished by the end of 1952.

#### PLATE STORAGE /Point (D), Enclosure (A)/

13. This area measured about 18,000 sq. m., including space for roads and tracks; useable space--about 14,000 sq. m. The plate and profile iron storage was located southwest of the shipbuilding shop. Completed in 1952.

#### CRANAGE /Point (E), Enclosure (A)/

14. Two cranes operating on overhead tracks paralleling the shipbuilding shop were planned. In addition to the plate storage, the cranes could also service the plate-straightening machines and the annealing furnaces, thus rendering the installation of lifting facilities for the latter unnecessary. The cranes were to have a radial range of 18 m. and a lifting capacity of three tons at the maximum range.
15. The construction of the foundations for the overhead tracks were finished during 1952. Crane-tracks with two cranes of three-ton lifting capacity each at 18 m. radial range were to be delivered by mid-1953.

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SHIPBUILDING WORKSHOPSShipbuilding shop. /Point F, Enclosure (A)/

16. This shop was finished in the fall of 1952 and was in full swing. The annual construction capacity required 12,125 tons of steel per year. This amount, plus an additional 20 per cent for vessels under repair, resulted in a quota of 14,600 tons of steel per year. As the shipbuilding shop could handle about 15,000 tons, it would be able to serve the demands of four new-construction-buildingways and normal repair work.
17. The shipbuilding shop housed the following: offices of the plant engineer, foremen, and calculators; and sanitary rooms, an accident prevention section, lavatories, and dressing rooms for a total labor force of 2,500 hands working in two shifts.
18. The various sections of the shop were: pattern shop, steelship-construction shop, forge, locksmith shop, thin-plate machining shop, and welding shop.
19. The total labor of 2,500 included the personnel working on the buildingways.

Workshop building No. IV. /Point 7, Enclosure (A)/

20. This structure, finished in the spring of 1951, accommodated the rigging shop, paint shop, derusting shop, ship-cleaning section, plant maintenance section, and the plant electrician's shop. The building includes welfare facilities for a total labor force of 800 including about 400 women.

Shop No. V.. wood-working shop. /Point 8, Enclosure (A)/

21. Construction of this shop was begun in the spring of 1952 and was to be completed during the summer of 1953. It was to contain the ship carpenter's shop, the model carpentry, the model storage, and assembly shops of the ship assembly section. Welfare facilities were planned for a labor force up to 250 people.

Fitting-out shops

22. Two fitting-out shops for new-construction /Point 27, Enclosure (A)/ will be finished by late 1953.
23. Another fitting-out shop /Point 28, Enclosure (A)/ was built in 1950-51 on the premises of the former Hansa Shipyard which were also occupied by the Wismar Shipyard.

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ENGINE REPAIR SHOPSShop No. I /Point 9, Enclosure (A)/

24. This shop was in full operation since the spring of 1951 and accommodated the mechanical workshops and the test-stand for auxiliary engines, and offices and welfare facilities for a total labor force of 500. The shop was equipped with three travelling shop-crane of seven-ton lifting capacity each.

Shop No. II /Point 10, Enclosure (A)/

25. In full operation since the spring of 1951. This shop accommodated the pipe fitter shop, the plumber shop, the ship fitting shop (for repairs and new construction), offices and welfare facilities adequate for a labor force up to 500.

Shop No. III - machining of sheet metal /Point 11, Enclosure (A)/

26. In full operation since the summer of 1951. This shop accommodated the boiler smithy and the sheet-metal machining bay (for engine construction). It housed welfare facilities, offices, etc. for a labor force of 500. It was equipped with two travelling shop-crane of 20-ton-lifting capacity each. The two travelling shop-crane could operate together with a combined lifting capacity of 40 tons. The crane-tracks and the foundations were installed correspondingly.

WAREHOUSE /Point 12, Enclosure (A)/

27. A five-story structure of 80 x 30 m. Construction was started in 1952 and it was expected that the northern half was to be completed by the summer of 1953. It was to accommodate an extra electrode storeroom and offices for the warehouse administration, forwarding department, material distribution, and material testing section.
28. In the vicinity of the warehouse, storing areas were to be built for pipes, profile iron, and other items such as paints and POL. The warehouse was to be equipped with freight-car, vehicle (and other small weight) scales, and two elevators with a lifting capacity of one and three tons respectively. Moreover, a gantry-crane with 40-ton lifting capacity was to be installed for lifting the marine-diesels of new constructions.

ADMINISTRATION BUILDING /Point 13, Enclosure (A)/

29. In complete use since the end of 1951.

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WELFARE AND CULTURAL FACILITIESWelfare building /Point 14, Enclosure (A)/

30. The shipyard construction plan included a welfare building with two messhalls for 500 persons and one kitchen. This was completed and had been in operation since late 1951. It was planned to expand this building during 1953 to include one more messhall for 1,000 persons (also useable for schooling and meetings), and tailor, shoemaker, barber, and co-operative shops.

Medical department building /Point 15, Enclosure (A)/

31. Built in 1950, measured 33 x 12 m. Accommodated the shipyard physician, the dentist, sick-rooms, ray treatment rooms, and X-ray station for the treatment of all shipyard personnel.

MISCELLANEOUS INSTALLATIONSShip locker building /Point 16, Enclosure (A)/

32. Completed during the spring of 1951.

Removed-items-storage /Point 17, Enclosure (A)/

33. The shipyard construction plan provided for a removed-items-storage, i.e., a place where items removed from the ships were to be stored and protected from the weather during overhaul periods. It was to be built in 1953.

Shipyard police and fire department building /Point 18, Enclosure (A)/

34. Completed by the end of 1950. The hose-tower was finished during the spring of 1951.

Janitorial building /Point 19, Enclosure (A)/

35. This building was completed in the spring of 1951. It will house all the janitors working in 3 shifts and the guard detachment.

QUAYAGE /Points 20, 25, and 26, Enclosure (A)/

36. By the end of 1952, 630 running meters had been built along the west side of the West Harbor Basin. Also by this time, 100 running meters were constructed along the north bank, east of the buildingways. The depth along the quay in the West Harbor was eight meters under mean water, and along the north quay six meters under mean water. In 1953 it was expected that another 100 m. was to be completed along the north quay, and approximately another 75 m. along the west side of West Harbor Basin. The construction plans also included reinforcement of the quay along the east side of the harbor basin (Derutra-Kai) by 1955, in order to gain more berthing and fitting-out space.

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Diesel Locomotive

46. Two diesel locomotives of 90 hp. each were needed for hauling railroad cars from the marshalling yard and for shunting on the shipyard premises. One of them was already available.

STEAM, ELECTRIC POWER, AND WATER SUPPLYSteam-heating plant No. I /Point 22, Enclosure (A)7

47. A boiler house finished in 1950 and put into operation in 1951 was able to supply steam to shops No. I, II, III, and IV and about 350 running meters of quays. The maximum output was 18 tons of steam per hour. The coal bunker and part of the coal conveying facility were completed in the spring of 1952.

Steam-heating plant No. II /Point 23, Enclosure (A)7

48. Contrary to plans, equipping this steam plant as an electric power plant was unnecessary, since Power District NORD promised to supply the shipyard with the 5,000 kw. required by it after completion.

Electric power supply

49. As mentioned above, power was guaranteed by Power District NORD. Transformer and compressed air stations were to be installed in the workshops and in the buildingway of the new-construction section. Annealing and heating furnaces were fed from the municipal gas system. According to the Power District NORD, gas was available in sufficient quantities rendering the installation of a gas generator unit on the shipyard premises unnecessary.

Water supply and drainage

50. The shipyard was fed from the municipal water system. Waste water was carried off by the municipal sewer system.

LABOR FORCE

51. After preparatory shop-assembly was started on 1 Jan. 52, the number of laborers was increased so as to reach the prescribed 6,200 at the moment that the second keels were laid down on the two buildingways, i.e., about mid-1952. Figuring a period of 10 months on the buildingways for the first buildingway-load, gradually decreasing to 5.5 months for the fifth buildingway-load, the last launching of the vessels to be built during the first Five Year Plan could take place approximately on 31 Aug. 55, thus leaving four more months until the end of that year for fitting out the vessels.

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52. The number of working hours which were to be required when the fifth or the tenth vessel respectively (if two were laid down at one time) were:

265,000 for type I  
521,000 for type II

further:

2 x 265,000 = 530,000  
521,000

totals 1,051,000 working hours for two buildingways.

52. Hence, the labor force directly engaged in construction work (directly productive labor) should have the following strength by the end of 1955:

1,051,000 x 12

= 960 hands.

5.5 x 2,400

53. 3,300 directly productive laborers were included in the total labor force of 6,250. The following number were to be available for the ship repair program in order to continue along the 1951 norm:

3,300  
- 960

2,340 directly productive repair workers.

54. In accordance with the 1951 daily quota, an annual repair program worth 30 million East DM's could be carried out with this labor. It must be added, that the total strength of 6,250 as listed above does include the number of laborers of the sub-installation Kanalstrasse (formerly called Waggon Factory) who worked directly and exclusively for the production of the Wismar Shipyard. Laborers of the Kanalstrasse sub-installation engaged in the production of items normally not made by shipyards, although they are delivered to Wismar and other shipyards, are not included in the total strength of the Wismar shipyard.

#### FORGE IN THE KANALSTRASSE SUB-INSTALLATION

55. The forge produces large forgings for the Warnemuende and Wismar shipyards and other industrial enterprises in Mecklenburg.

#### ARTIST'S CONCEPTION OF THE COMPLETED WISMAR SHIPYARD /See Enclosure (E)7

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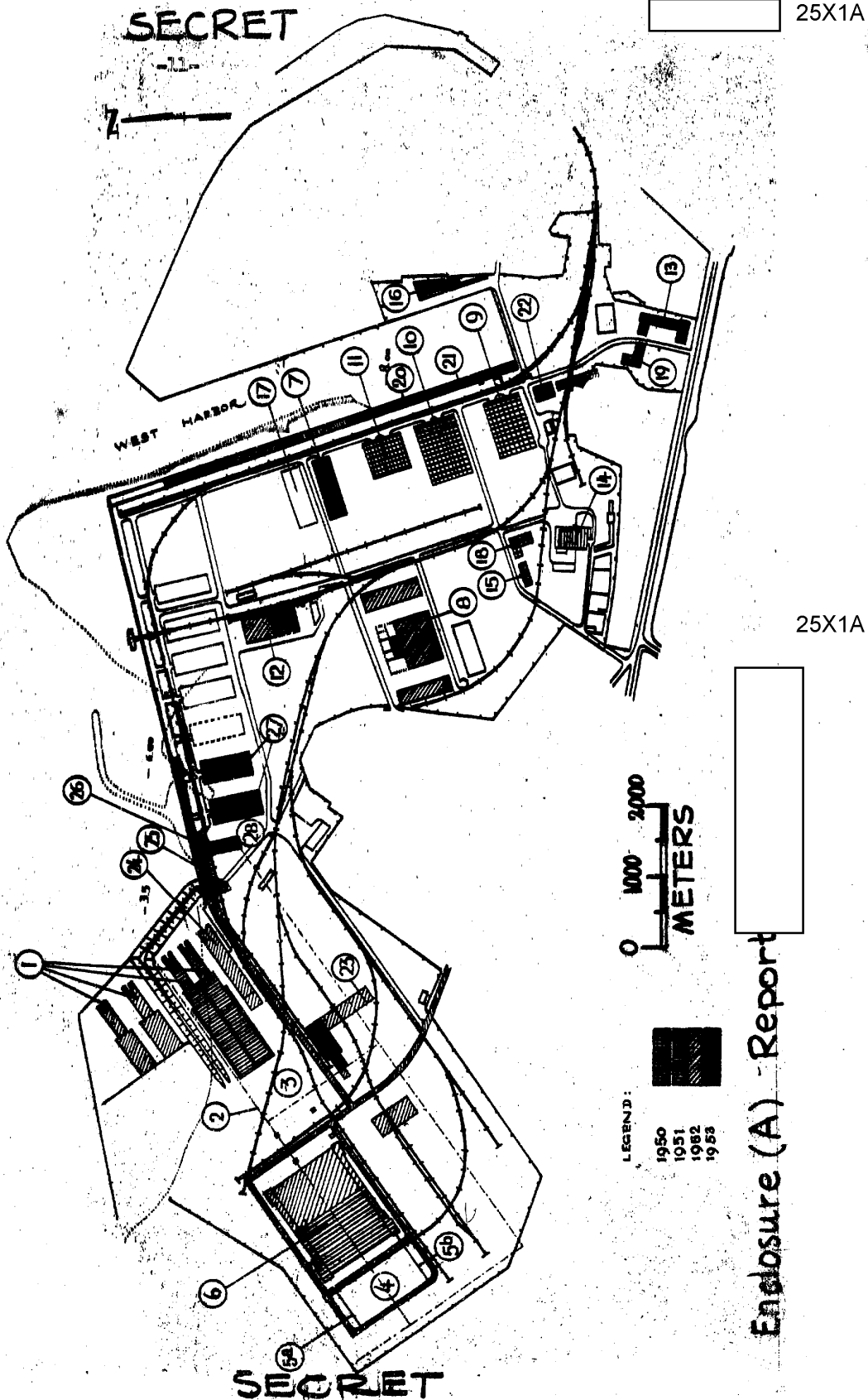
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[ ] **Comments:** The type and amount of production as given in this report do not appear to be valid, since there are indications that production of Type I vessels was halted for a time and then begun again, and that production of Type II vessels was abandoned entirely. Nevertheless this information is reported as given by the source, since he used these two ship examples in describing the reasons for certain dimensions, labor requirements, power requirements, construction methods, etc. However, the end picture in 1955 of the buildingways, ship-building shops, etc. will be the same regardless of what the shipyard is turning out and how many people are needed to do it. 7

ENCLOSURE (A) Layout Wismar Shipyard  
ENCLOSURE (B) Buildingway Layout and Data  
ENCLOSURE (C) Building Slip Pressure  
ENCLOSURE (D) Buildingway Loads (Parts A and B)  
ENCLOSURE (E) Artist's Conception of the Completed Wismar Shipyard

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Layout WISMAR Shipyard



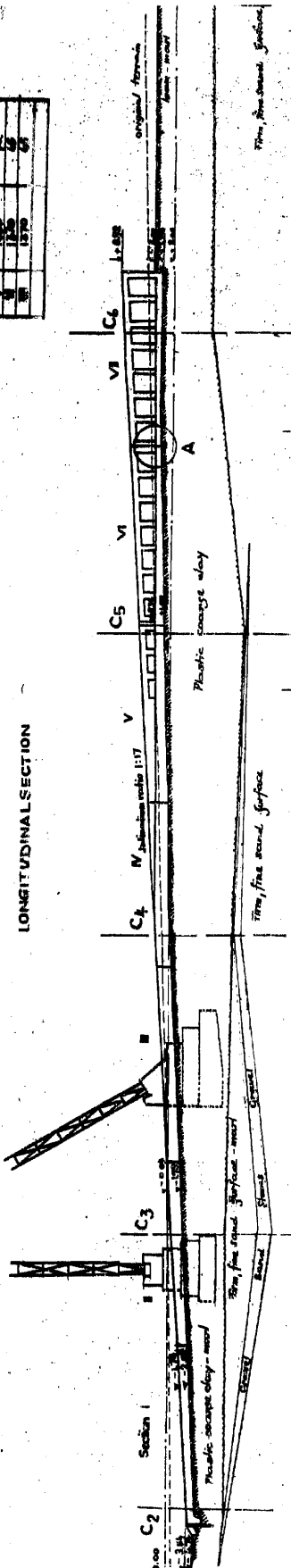
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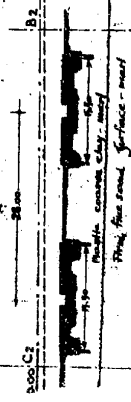
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Station	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100

# Buildingway Layout and Data

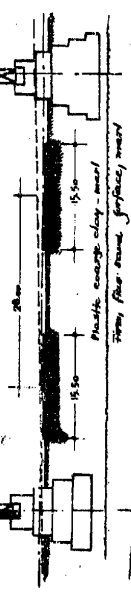
## LONGITUDINAL SECTION



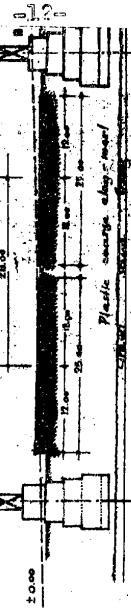
## CROSS SECTION 2-2"



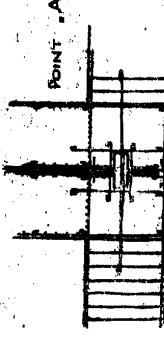
## CROSS SECTION 3-3"



## CROSS SECTION 4-4"



## POINT A"



## CROSS SECTION 5-5"



## CROSS SECTION 6-6"



## LONGITUDINAL ANCHORAGE OF THE INDIVIDUAL SECTIONS OF THE BUILDINGWAY

## NEW SITUATION OF THE BUILDINGWAY W/O PILES

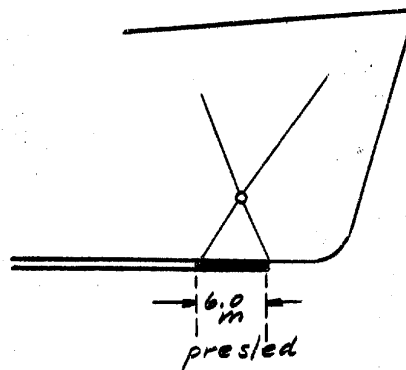
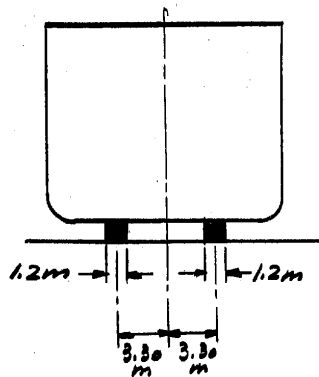
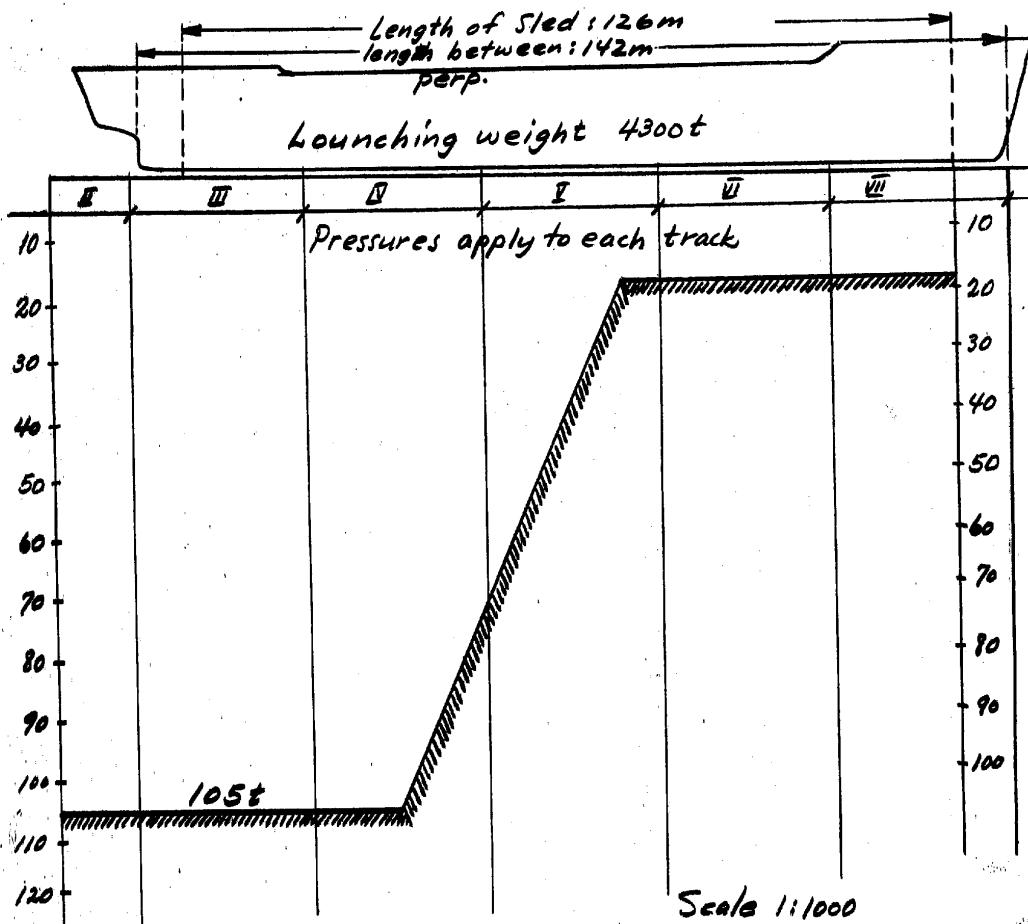
Enclosure (B) Report

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Building slip pressure in t/m Type IV (WISMAR)

Enclosure (C)

Report

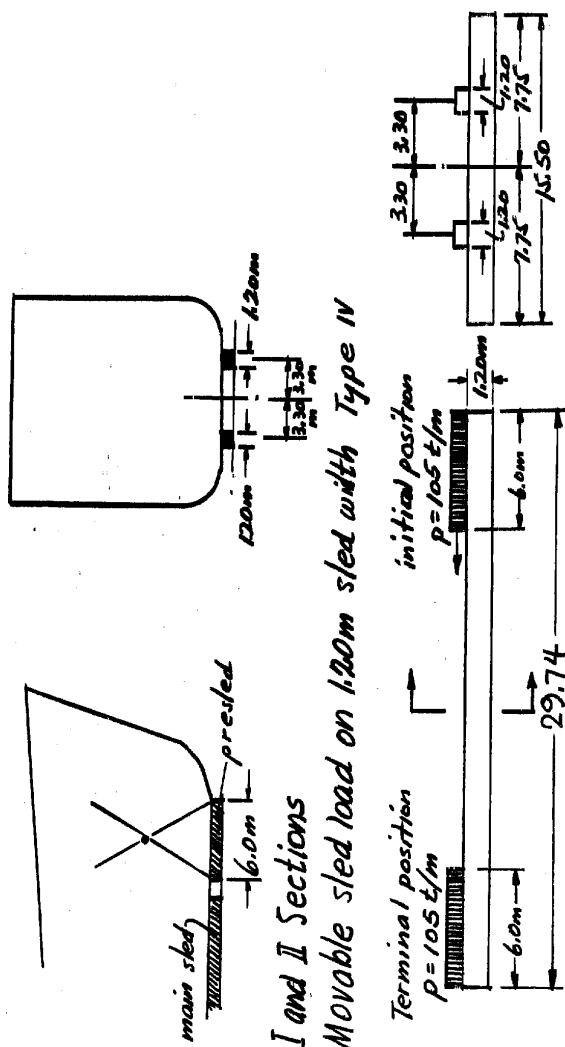
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Loading the slip by means of presled with 105 t/m launching weight or with the main sled (larger part of the ship) with 17.1 t/m

Buildingway Loads - Shipyard WISMAR

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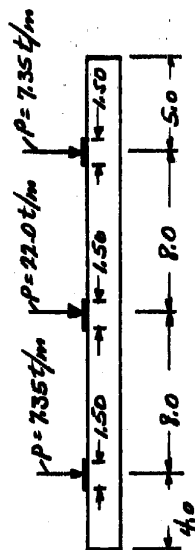
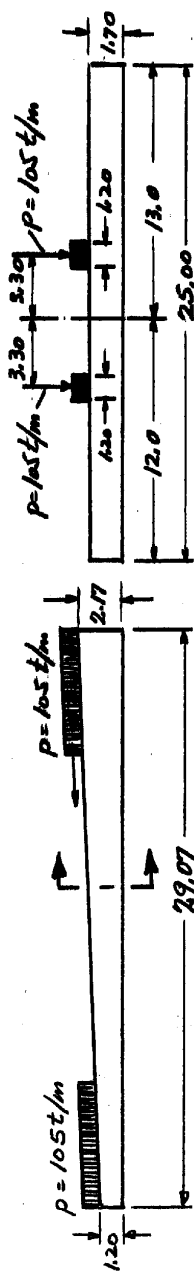
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### III Section

#### a. Moving Load



or:  
b. Stationary Load (by means of stacking)

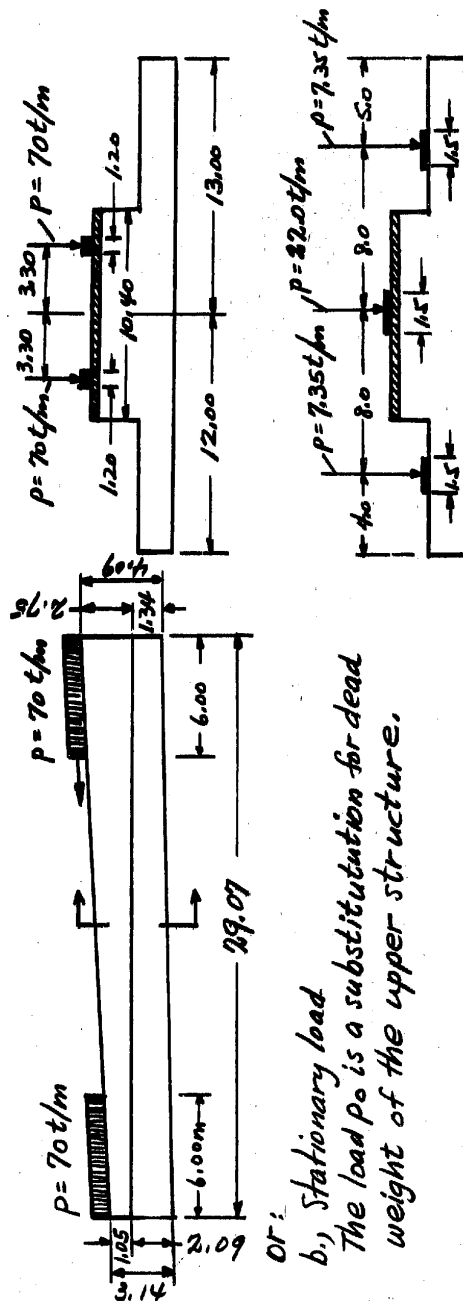
Buildingway Loads - Shipyard WISMAR  
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V. Section:  
a., Moving load



or:  
b., Stationary load  
The load  $p_0$  is a substitution for dead weight of the upper structure.

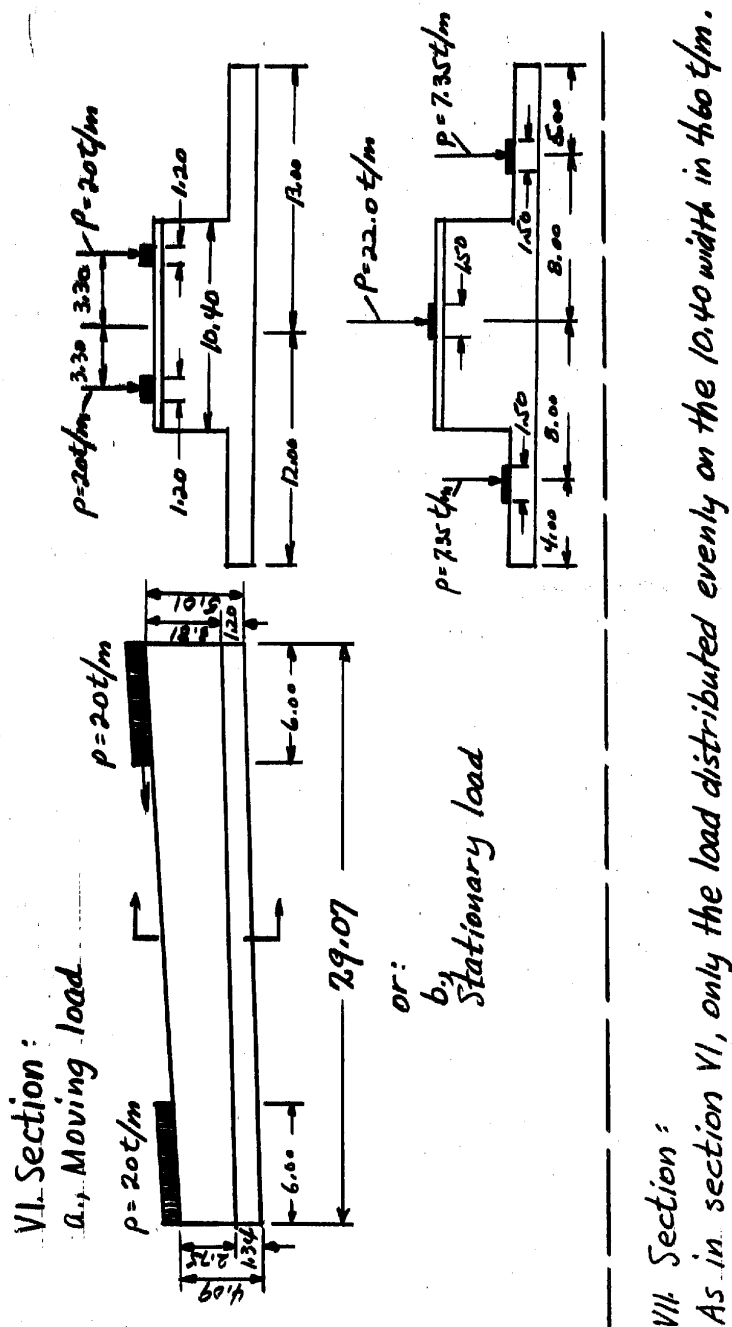
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Building Loads - Shipyard WISMAR

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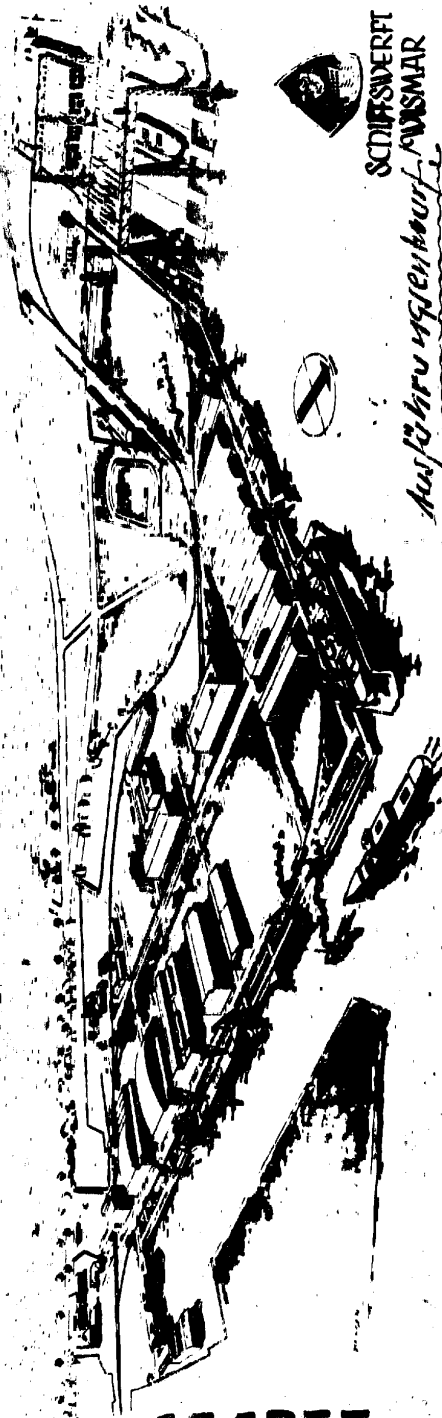
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Artist's conception of the Completed WISMAR SHIPYARD  
Enclosure (E) Report

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